

### **REMARKS / ARGUMENTS**

The present application includes pending claims 1-36, all of which have been rejected. The Applicant respectfully submits that the claims define patentable subject matter.

Initially, the Applicant notes that a goal of patent examination is to provide a prompt and complete examination of a patent application.

It is essential that patent applicants obtain a prompt yet complete examination of their applications. Under the principles of compact prosecution, each claim should be reviewed for compliance with every statutory requirement for patentability in the *initial review* of the application, even if one or more claims are found to be deficient with respect to some statutory requirement. Thus, Office personnel *should* state *all* reasons and bases for rejecting claims in the *first* Office action. Deficiencies should be explained clearly, particularly when they serve as a basis for a rejection. Whenever practicable, Office personnel should indicate how rejections may be overcome and how problems may be resolved. A failure to follow this approach can lead to unnecessary delays in the prosecution of the application.

See Manual of Patent Examining Procedure (MPEP) § 2106(II). As such, the Applicant assumes, based on the goals of patent examination noted above, that the present Office Action has set forth "all reasons and bases" for rejecting the claims.

Claims 1, 2, 10-14, 22-26 and 34-36 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over USP 5,740,526 ("Bonta"), in view of USP 7,324,783 ("Anderson") and USP 7,253,779 ("Greer"). Claims 3-9, 15-21 and 27-33 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Bonta, Anderson and Greer, and further in view of USP 5,465,410 ("Hiben"). The Applicant respectfully traverses these

rejections at least for the reasons previously set forth during prosecution and at least based on the following remarks.

#### I. EXAMINER'S RESPONSE TO ARGUMENTS

The Examiner states the following at pages 6-7 of the Office Action:

Applicant's arguments filed 5/22/2009 have been fully considered but they are not persuasive.

The applicant argues that the Greer reference does not teach "selecting at least one of said plurality of signal paths for receiving a signal, wherein said selecting is based on at least one of the modified signal quality metrics". The examiner disagrees for the following reasons.

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Looking more in depth into the cited passage, **it is shown in col. 13, lines 8-10 that the signal quality metric is either maximized or minimized. According to the examiner, that is the same as the signal quality metric being modified.** The examiner believes at this time that more specifics regarding to how the signal quality metric is modified is needed in the claims in order to overcome the Greer reference.

For the above reasons, the examiner stands by his rejection.

The Applicant respectfully disagrees, especially with the above bolded portion of the argument. Referring to Fig. 3 of Greer, the control circuitry 22 determines a signal performance metric for the received signal using each of the antennas 70 and 76. The antenna providing the better metric value for the received signal is then selected. See Greer at col. 9, lines 50-56. Greer, at col. 13, lines 8-10, discloses that the operative

antenna is selected to maximize (or minimize) the selected signal quality metric of a received signal. **In other words, the signal performance metrics determined by the control circuitry 22 for each antenna are analyzed and the antenna that has the maximum (or minimum) of the signal performance metrics is selected.** Obviously, “the signal quality metric is either maximized or minimized” means that the antenna with the max (or min) metric is selected. However, the fact remains that no modifying is performed on the already determined metric, and the Examiner, therefore, cannot equate “the signal quality metric is either maximized or minimized” with “the signal quality metric being modified.” Greer simply selects an antenna based on the determined signal performance metric (e.g., signal power or signal-to-noise ratio; *See id.* at col. 3, ll. 54-56), and does not perform any selection of a signal path based on a modified signal quality metric. In fact, Greer does not even disclose any modifying to the signal quality metric of the received signal, let alone selection of a signal path based on such modified signal quality metric.

The Applicant respectfully points out that the Examiner, in the Response to Arguments section of the Final Office Action, has not addressed the deficiency of the references under M.P.E.P. § 2143.01, as explained in pages 14-15 of the May 22, 2009 response.

At least based on the above reasons, the Applicant maintains all arguments stated in the May 22, 2009 response.

### **REJECTION UNDER 35 U.S.C. § 103**

In order for a *prima facie* case of obviousness to be established, the Manual of Patent Examining Procedure, Rev. 6, Sep. 2007 ("MPEP") states the following:

The key to supporting any rejection under 35 U.S.C. 103 is the clear articulation of the reason(s) why the claimed invention would have been obvious. The Supreme Court in *KSR International Co. v. Teleflex Inc.*, 82 USPQ2d 1385, 1396 (2007) noted that the analysis supporting a rejection under 35 U.S.C. 103 should be made explicit. The Federal Circuit has stated that "rejections on obviousness cannot be sustained with mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness."

See the MPEP at § 2142, citing *In re Kahn*, 441 F.3d 977, 988, 78 USPQ2d 1329, 1336 (Fed. Cir. 2006), and *KSR International Co. v. Teleflex Inc.*, 82 USPQ2d at 1396 (quoting Federal Circuit statement with approval). Further, MPEP § 2143.01 states that "the mere fact that references can be combined or modified does not render the resultant combination obvious unless the results would have been predictable to one of ordinary skill in the art" (citing *KSR International Co. v. Teleflex Inc.*, 82 USPQ2d 1385, 1396 (2007)). Additionally, if a *prima facie* case of obviousness is not established, the Applicant is under no obligation to submit evidence of nonobviousness.

The examiner bears the initial burden of factually supporting any *prima facie* conclusion of obviousness. If the examiner does not produce a *prima facie* case, the applicant is under no obligation to submit evidence of nonobviousness.

See MPEP at § 2142.

**II. The Proposed Combination of Bonta, Anderson and Greer Does Not Render Claims 1, 2, 10-14, 22-26 and 34-36 Unpatentable**

**A. Independent Claims 1, 13, and 25**

With regard to the rejection of independent claim 1 under 35 U.S.C. § 103(a), the Applicant submits that the combination of Bonta, Anderson, and Greer does not disclose or suggest at least the limitation of "selecting at least one of said plurality of signal paths for receiving a signal, wherein said selecting is based on at least one of the modified signal quality metrics," as recited by the Applicant in independent claim 1.

The Office Action states the following:

Referring to Claim 1, Bonta teaches a method for choosing at least one signal path, the method comprising:

Determining a signal quality metric for each of a plurality of signal paths (see col. 2, lines 53-57); and

Selecting at least one of said plurality of signal paths for receiving a signal, wherein said selecting is based on the at least one of the signal quality metric (see col. 2, line 62 to col. 3, line 4).

Bonta does not teach modifying the determined signal quality metric for a signal path. Anderson teaches modifying the determined signal quality metric for a signal path (see col. 7, lines 29-46 noting that this process can be applied to all antenna elements of Bonta). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teachings of Anderson to said device of Bonta in order to provide a more accurate method of measuring signal quality in order to ensure the best quality signal.

**The combination of Bonta and Anderson does not teach selecting at least one of said plurality of signal paths for receiving a signal, wherein said selecting is based on at least one of the modified signal quality metrics. Greer teaches selecting at least one of said plurality of signal paths for receiving a signal, wherein said selecting is based on at least one of the modified signal quality**

**metrics (see col. 12, line 59 to col. 13, line 10).** Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the teachings of Greer to the modified device of Bonta and Anderson in order to improve performance when multi antennas are used.

See Office Action at pages 2-3 (emphasis added). The Examiner concedes Bonta and Anderson do not disclose the above limitation, and then relies for support on col. 12, line 59 – col. 13, line 10 of Greer.

Greer discloses an antenna system that uses a plurality of antennas designed and oriented to provide radiation pattern, signal polarization and/or spatial diversity. The various diversity operational characteristics are achieved by using similar antennas physically oriented to provide the diversity attributes or by using dissimilar antennas. In addition, the operative antenna is selected to maximize (or minimize) a selected signal quality metric of a received signal. See *Greer* at col. 13, lines 8-10. More specifically, referring to Fig. 3 of Greer, the control circuitry 22 determines a signal performance metric for the received signal using each of the antennas 70 and 76. The antenna providing the better metric value for the received signal is then selected. See *id.* at col. 9, lines 50-56. In this regard, Greer simply selects an antenna based on a determined signal performance metric (e.g., signal power or signal-to-noise ratio; See *id.* at col. 3, ll. 54-56), and does not perform any selection of a signal path based on a modified signal quality metric. In fact, Greer does not even disclose any modifying to a signal quality metric of a received signal, let alone selection of a signal path based on such modified signal quality metric.

Therefore, the Applicant maintains that the combination of Bonta, Anderson, and Greer does not disclose or suggest at least the limitation of "selecting at least one of said plurality of signal paths for receiving a signal, wherein said selecting is based on at least one of the modified signal quality metrics," as recited by the Applicant in independent claim 1.

The Applicant also respectfully draw the attention of the Examiner to the prohibitions as set forth in M.P.E.P. § 2143.01, which states that "[i]f the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the reference are not sufficient to render the claims *prima facie* obvious." See M.P.E.P. § 2143.01. Regardless of what Anderson allegedly teaches, Anderson and Greer cannot modify Bonta to use modified signal quality metric as this would present a radical change or an extreme departure from the principle operation of Bonta. More specifically, Bonta uses original and unmodified signal quality metrics from two antennas, where the difference of the two measured quality metrics is compared to a threshold for purposes of determining whether or not to use a third signal quality metric. If, *arguendo*, Bonta is to use modified signal quality metric, this would result in a deviation of the difference between the two metrics and incorrect application of the threshold value (note that the threshold value is set for use with regard to originally measured and unmodified signal quality metrics). This will also lead to incorrect determination of whether or not to use

the third signal quality metric. For at least these reasons, the proposed modification of Bonta is prohibited and the obviousness rejection cannot be maintained.

Accordingly, the proposed combination of Bonta, Anderson, and Greer does not render independent claim 1 unpatentable, and a *prima facie* case of obviousness has not been established. The Applicant submits that claim 1 is allowable. Independent claims 13 and 25 are similar in many respects to the method disclosed in independent claim 1. Therefore, the Applicant submits that independent claims 13 and 25 are also allowable over the references cited in the Final Office Action at least for the reasons stated above with regard to claim 1.

**B. Rejection of Dependent Claims 2, 10-12, 22-23, 26 and 34-36**

Based on at least the foregoing, the Applicant believes the rejection of independent claims 1, 13 and 25 under 35 U.S.C. § 103(a) as being unpatentable over Bonta in view of Anderson and Greer has been overcome and requests that the rejection be withdrawn. Additionally, claims 2, 10-12, 22-23, 26 and 34-36 depend from independent claims 1, 13 and 25, respectively, and are, consequently, also respectfully submitted to be allowable based on the above arguments.

The Applicant also reserves the right to argue additional reasons beyond those set forth above to support the allowability of claims 2, 10-12, 22-23, 26 and 34-36.



**III. The Proposed Combination of Bonta, Anderson, Greer and Hiben Does Not Render Claims 3-9, 15-21 and 27-33 Unpatentable**

Based on at least the foregoing, the Applicant believes the rejection of independent claims 1, 13 and 25 under 35 U.S.C. § 103(a) as being anticipated by Bonta has been overcome and requests that the rejection be withdrawn. Additionally, since the additional cited reference (Hiben) does not overcome the deficiencies of Bonta, claims 3-9, 15-21 and 27-33 depend from independent claims 1, 13 and 25, respectively, and are, consequently, also respectfully submitted to be allowable based on the above arguments. The Applicant also reserves the right to argue additional reasons beyond those set forth above to support the allowability of claims 3-9, 15-21 and 27-33.

In general, the Final Office Action makes various statements regarding claims 1-36 and the cited references, which statements are now moot in light of the above. Thus, the Applicant will not address such statements at the present time. However, the Applicant expressly reserves the right to challenge such statements in the future should the need arise (e.g., if such statement should become relevant by appearing in a rejection of any current or future claim).

**CONCLUSION**

Based on at least the foregoing, the Applicant believes that all claims 1-36 are in condition for allowance. If the Examiner disagrees, the Applicant respectfully requests a telephone interview, and requests that the Examiner telephone the undersigned Attorney at (312) 775-8176.

The Commissioner is hereby authorized to charge any additional fees or credit any overpayment to the deposit account of McAndrews, Held & Malloy, Ltd., Account No. 13-0017.

A Notice of Allowability is courteously solicited.

Respectfully submitted,

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